

Appendix M

FPC-DE
FILE: XX-XXXX

FINAL EFFLUENT COMPOSITE SAMPLING AND
TESTING USED FOR WEEKLY NPDES SAMPLING
(Excerpted from FPC-DE Procedure OM269.010)

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3.0 RESPONSIBILITY

- 3.1 It is the responsibility of all Operators that are qualified and assigned to the WWTP to follow the procedure and to cross reference the Daily Work Instructions for specific daily instructions.
- 3.2 It is the responsibility of the Shift Supervisor to ensure that the procedure is followed and that any instructions that are noted in the Daily Work Instructions are also followed.
- 3.3 It is the responsibility of the Production Manager to maintain the procedure and to note any additional instructions in the Daily Work Instructions. The Production Manager is also responsible for reviewing testing and monitoring results and forwarding completed and reviewed records to the Environmental Affairs Manager.
- 3.4 It is the responsibility of the Environmental Affairs Manager to review and send reports to appropriate agencies and file all records of testing/monitoring for their specified times as required by State and Federal rules and regulations.

6.0 PROCEDURE

6.6 Sampling Requirements

6.6.1 FPC-DE is required to take specific effluent wastewater samples and conduct analytical testing by a certified outside waste water laboratory. Routine sample schedule may change due to plant or lab scheduling. The following is the NPDES required sampling and testing for TSS and BOD with its required frequency. Annual parameter analysis is also completed on a composite sample.

6.6.2 *Weekly Sampling*

6.6.2.1 *24 Hour Composite Sample (½ gallon, 1900 ml, sample)* - Is taken every week from the Effluent (001) of the Waste Water Treatment Plant, starting Monday morning at 9:00 and completed 9:00 Tuesday using the ISCO sampler.

6.6.2.3 *Outside Laboratory* - Supplies containers for samples and picks them up on Tuesday after 10:00 a.m.

6.7 Composite Sampling, Calculations and Logging

6.7.1 Before starting composite sampling, acquire a Sample Data Sheet (Attachment A1) and fill out as follows:

- A) Check appropriate box for sampling to be taken.
- B) Enter location of sample being taken (permitted plant effluent point is 001).
- C) Enter flow meter calibration factor. This factor is based on the flow meter calibration which is determined by Instrumentation department based on equipment in service. The flow meter is located in the WWTP Control Room.
- D) "Total Flow" (in gallons) - Can only be entered after the composite is completed and the initial flow meter reading is subtracted from the final flow meter reading and multiplied by the flow meter calibration factor.
- E) "Initial Flow Meter Reading" - Enter reading when composite sample is started. Also enter date, time and Operator starting composite sample.
- F) "Final Flow Meter Reading" - Enter reading after last composite sample has been taken. Also enter date, time and Operator completing composite sample.
- G) "Date" - Date that hours composite sample was taken. (Numbers down first column in numerical

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- order, 1-25, indicates which hour of composite sample. Number 25 is for totaling, since a composite sample only consists of 24 hours.)
- H) "Time" - Time composite was taken.
 - I) "Total Flow this Hour" - Enter flow for that hour by subtracting hour one's flow meter reading from hour two's reading and repeat for hour two by subtracting its reading from hour three's reading and so on.
 - J) "Flow Meter Reading" - Enter flow meter reading at beginning of each hour.
 - K) "Sample Size" - Will be calculated after 24th hour sample has been taken by following calculation at bottom of Sample Data Sheet. Reference Step "M" of this section.
 - L) "Operator Initials" - Enter initials of Operator who logged data for that hour.
 - M) "Calculation to Determine 24-Hour Composite Sample Size" - This formula determines each hour's sample size based on overall sample needed and actual flow by: take 1900 ml (total sample size required for normal weekly composite which equals 1900 ml or ½ gallon) and divide it by the total hourly flow (all 24 hours total flow). Take this number 3 decimal places back from the decimal point, ie. .051 and multiply this number by each hour's total flow, giving you each hour's sample size (log in column "Sample Size." See Step "L" of this section.)
 - N) When the sample size has been determined the composite sample is made up using aliquots from each ISCO bottle. **Vigorously shake** each ISCO bottle then measure the correct amount into a graduated cylinder. Pour each aliquot into the ½ gallon sample bottle.
 - O) "Sample Refrigerated - Yes or No" - Refrigerate all samples unless otherwise stated.
 - P) "Sample Picked Up - Date, Time and By" - Enter the date, time and individual's initials who picked up the composite sample. Every sample picked up by an outside service requires a "Chain of Custody Record" which is supplied by the service taking the sample. Check to confirm information entered on "Chain of Custody Record" is accurate, ie. proper sample description, analysis required, date, time and quantity. Then sign off as relinquisher and sampler. After the outside service representative has signed off, make sure you retain a copy for our records.

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